

**DOGM MINERALS PROGRAM**

Checklist for Board Approval  
of  
**FORM AND AMOUNT OF SURETY**

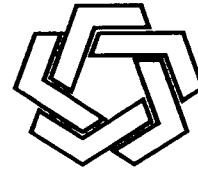
Prepared April 2, 1998

Company Name Harper Contracting, Inc.  
 Mine Name Parley's Canyon Quarry  
 File No. M/035/012

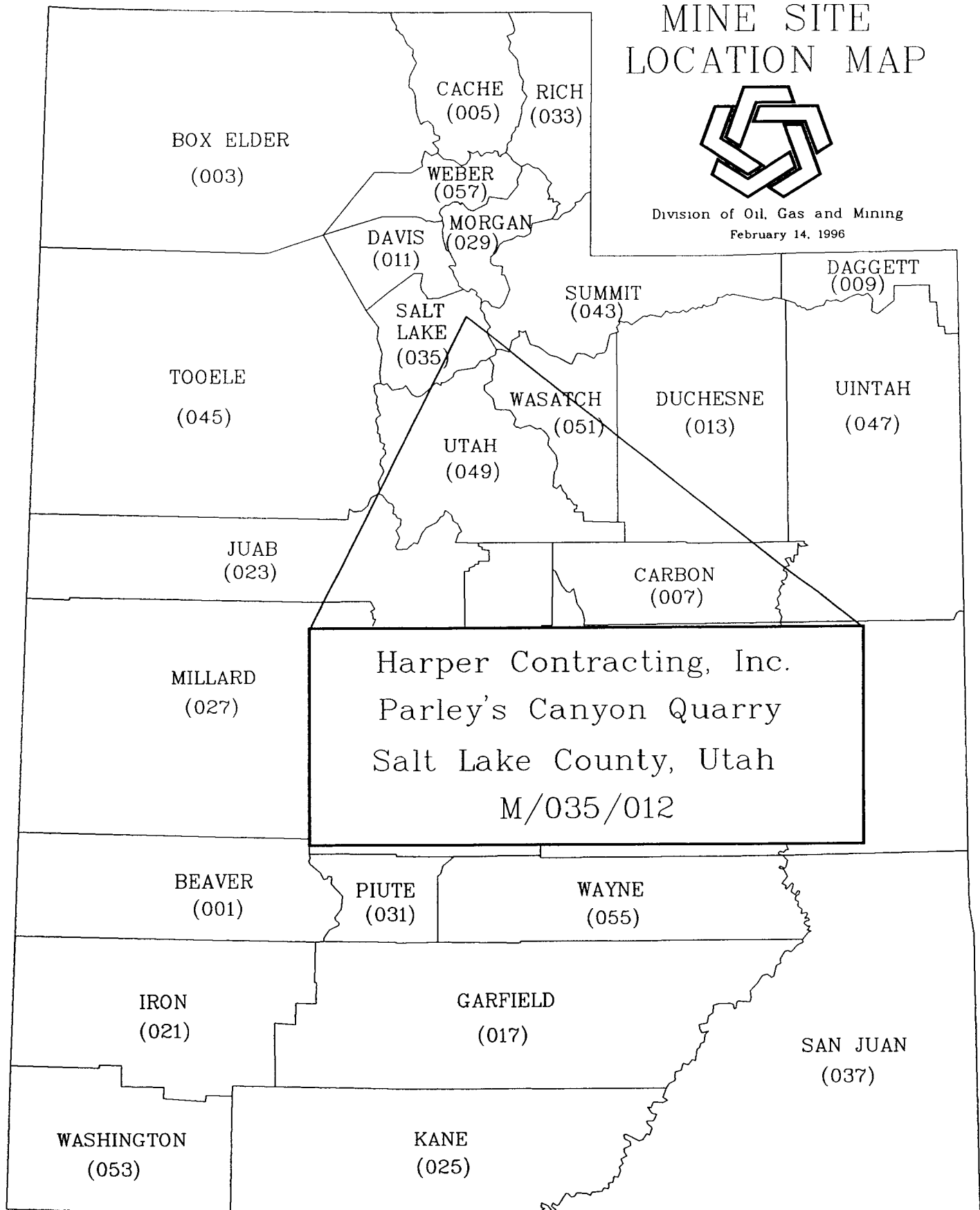
Items	Provided		Remarks
	Yes	No	
Executive Summary	X		
Location Map	X		
Reclamation Bond Estimate	X		
Signed Reclamation Contract	X		
Signed Power of Attorney/ Affidavit of Qualification	X		
Bond/Reclamation Surety	X		Rider to existing bond
Surety Sign Off (Other State/Federal Agencies)		X	N/A
RDCC contacted		X	N/A

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# MINE SITE LOCATION MAP



Division of Oil, Gas and Mining  
February 14, 1996



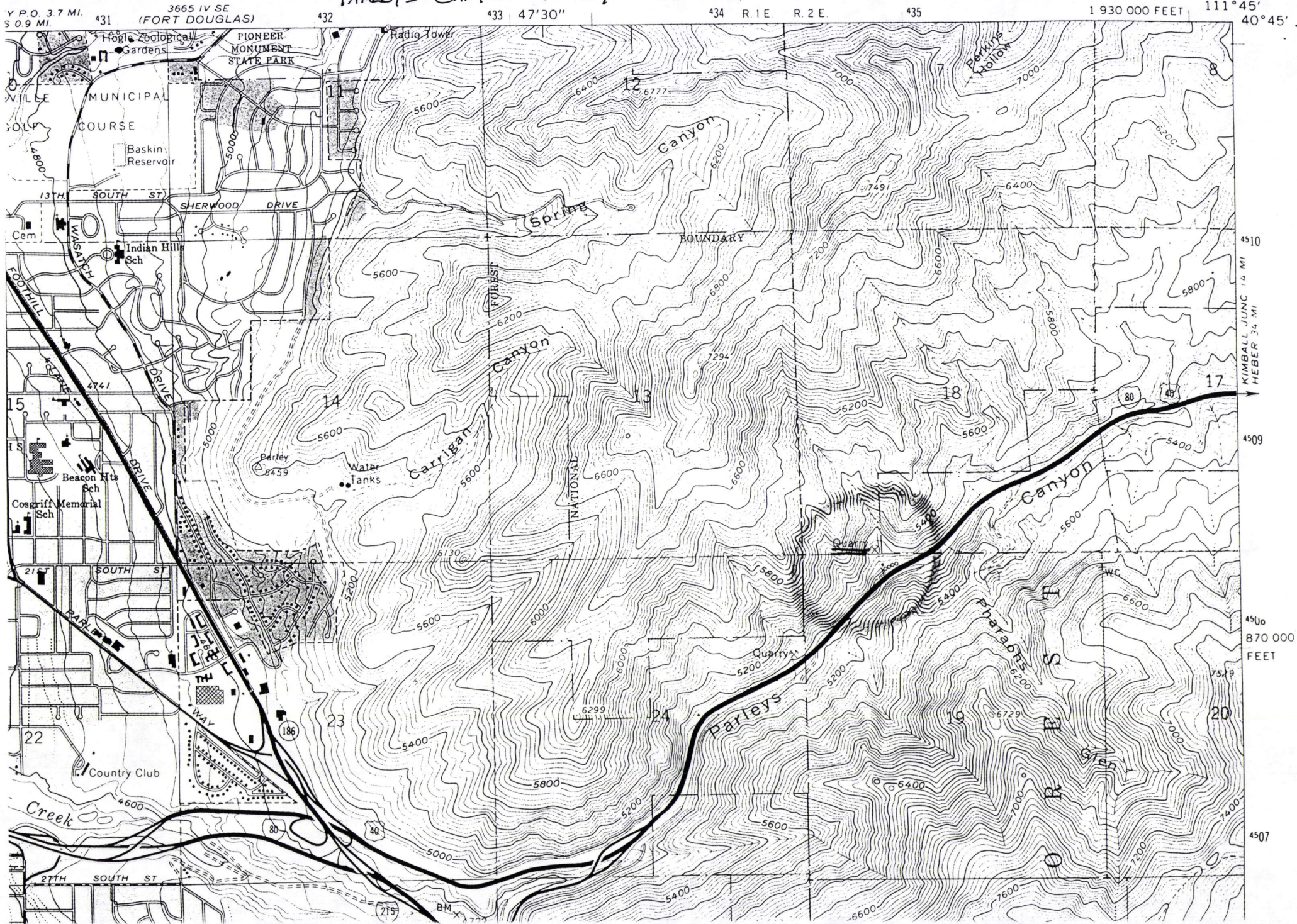


HARPER CONTRACTING, INC.  
PARLEY'S CANYON QUARRY

M/035/012

SUGAR HOUSE QUADRANGLE  
UTAH-SALT LAKE CO.  
7.5 MINUTE SERIES (TOPOGRAPHIC)

36°  
(MOJAVE)





## HARPER CONTRACTING RECLAMATION ESTIMATES, 1996 BOND CALCULATIONS

Item	Subgroup	1996 Reference	1996 Unit Cost	Cost Unit per	Variable 1	Variable 1 Units	Variable 2	Variable 2 Units	Variable 3	Variable 3 Units	1996 Cost
Gates & Signs	Gate(s)	Estimate	\$250 00	ea		1 ea					\$250
	Sign(s)	Estimate	\$25 00	ea		2 ea					\$50
	Labor	Estimate	\$25.00	hr		16 hrs					\$400
Regrading		Means, 022-200-242-5500	\$0 96	yd3		2000 yds					\$1,920
Safety Berms	Pit Benches	Means, 022-200-216-6050	\$4 74	yd3		7.5 yd3/berm		24 benches		2 berms/bench	\$1,706
	Access Roads	Means, 022-200-216-6050	\$4 74	yd3		24 yd3/berm		5 berms			\$
Roads and Operational Areas	Side Cast Replacement	Means, 022-200-238-0200	\$1 97	yd3		3100 road feet		0 24516 yd3/ft		0.5 recovery	\$7,~
	Ripping Pit Access Roads		\$410 00	acre		3100 road feet		20 ft wide		0.5 ripped	\$292
	Ripping Pit Floor, Benches		\$410 00	acre		9 9 acres					\$4,059
	Water Bar Construction	Means, 022-200-238-0200	\$1 97	yd3		0 25 yd3/water bar		3400 road feet		150 feet/water bar	\$11
Cleanup	General Site Cleanup	Estimate	\$50 00	acre		16 acres					\$800
	Loading/Trucking	Estimate	\$345 00	piece		11 pieces					\$3,795
	FEL	Means, 016-400-408-4760	\$1,050 00	day		2 days					\$2,100
	Supervision	Estimate	\$30.00	hr		16 hours					\$480
Revegetation	Mulch	Estimate	\$475 00	acre		16 1 acres					\$7,648
	Fertilizer		\$150 00	acre		16 1 acres					\$2,415
	Seed		\$66 70	acre		16 1 acres					\$1,074
Reclamation Supervision			\$30 00	hr		32 hours					\$960
										Total	\$29,277
										Add 10% cont	\$32,205
										Escalation	\$36,

## HARPER CONTRACTING RECLAMATION ESTIMATES, JANAUARY 1998 AMENDMENT

Item	Subgroup	1996 Reference	1998 Unit Cost	Cost Unit per	Variable 1	Variable 1 Units	Variable 2	Variable 2 Units	Variable 3	Variable 3 Units	1998 Cost	Comment #
Gates & Signs	Gate(s)	Escalate 1996 cost by 2.52%/yr	\$262.76	ea	1	ea					\$263	2
	Sign(s)	Escalate 1996 cost by 2.52%/yr	\$26.28	ea	2	ea					\$53	
	Labor	Escalate 1996 cost by 2.52%/yr	\$26.28	hr	16	hrs					\$420	
Regrading		Means, 022-200-242-5500	\$1.00	yd3	4000	yds					\$4,000	1,3
Safety Berms	Pit Benches	Means, 022-200-216-6050	\$5.05	yd3	7.5	yd3/berm	17	benches	2	berms/bench	\$1,288	1,4
	Access Roads	Means, 022-200-216-6050	\$5.05	yd3	24	yd3/berm	5	berms			\$606	1,7
Roads and Operational Areas	Side Cast Replacement	Means, 022-200-238-0200	\$2.04	yd3	3460	road feet	0.24516	yd3/ft	0.5	recovery	\$865	1,6
	Ripping Pit Access Roads	Escalate 1996 cost by 2.52%/yr	\$430.92	acre	3460	road feet	20	ft wide	0.5	ripped	\$342	6
	Ripping Pit Floor, Benches	Escalate 1996 cost by 2.52%/yr	\$430.92	acre	6.7	acres					\$2,887	
	Water Bar Construction	Means, 022-200-238-0200	\$2.04	yd3	0.25	yd3/water	3460	road feet	150	feet/water bar	\$12	1,6
Cleanup	General Site Cleanup	Escalate 1996 cost by 2.52%/yr	\$52.55	acre	16.1	acres					\$846	1
	Loading/Trucking	Escalate 1996 cost by 2.52%/yr	\$362.61	piece	20	pieces					\$7,252	
	FEL	Means, 016-400-408-4760	\$1,000.00	day	4	days					\$4,000	
	Supervision	Escalate 1996 cost by 2.52%/yr	\$31.53	hr	32	hours					\$1,009	
Revegetation	Mulch	Escalate 1996 cost by 2.52%/yr	\$499.24	acre	16.1	acres					\$8,038	
	Fertilizer	Escalate 1996 cost by 2.52%/yr	\$157.66	acre	16.1	acres					\$2,538	
	Seed	Escalate 1996 cost by 2.52%/yr	\$70.10	acre	16.1	acres					\$1,129	
Reclamation Supervision		Escalate 1996 cost by 2.52%/yr	\$31.53	hr	48	hours					\$1,513	
Comment: 1 All Reference to Means refers to <u>Means Heavy Construction Cost Data, 12th Annual Edition</u> 2 No additional gates are necessary as part of the amendment. 3 Estimate that the second facility area has the same amount of material to regrade as the first. 4 250' elevation change, 15 X 15 benches. 5 No additional access road berms need to be constructed. 6 Main access road to top left unreclaimed. 7 Escalation based on 2.52%/yr, for a period of 5 years.												7
											Subtotal	\$37,061
											Add 10% cont	\$40,767
											Escalation Rounded	\$46,170 \$46,200

## EXECUTIVE SUMMARY

Prepared February 13, 1996

Amended March 26, 1998

**Mine Name:** Parley's Canyon Quarry  
**Operator:** Harper Contracting, Inc.  
4655 West 5415 South  
P.O. Box 18400  
Kearns, Utah 84118  
**Telephone:** (801) 250-0132  
**Contact Person:** Lawnie Mayhew

**I.D. No:** M/035/012  
**County:** Salt Lake County  
**New/Existing:** SMO to LMO  
**Mineral Ownership:** Patented, State, USFS  
**Surface Ownership:** Patented, State, USFS  
**Lease No.(s):** ML-4559  
**Permit Term:** Life of Mine

**Life of Mine:** 10 years

*Amended Changes to original NOI: A new crusher and processing area is being added to the east side of the quarry. The original proposed quarry size was reduced by 3.8 acres to accommodate the additional 3.8 acres of disturbance needed for the new facilities. This exchange in affected areas will keep the overall disturbance at the previously approved acreage (21.9 acres).*

**Legal Description:** SW/4 Section 18, and NW/4 Section 19, Township 1 South, Range 2 East, SLBM

**Mineral(s) to be Mined:** Limestone. Mine products include: road base, sewer rock, concrete aggregate, engineered fill, run of mine (ROM), and landscape rock.

**Mining Methods:** Conventional open pit surface mining by drilling and blasting. Limestone is crushed and screened onsite to appropriate product sizes.

**Acres to be Disturbed:** Total disturbed area of 21.9 acres. Historically disturbed area which is being redisturbed is 16.7 acres. Previously undisturbed area which will be disturbed is 5.2 acres. Reclamation treatments will be performed on 16.1 acres.

**Present Land Use:** Mining

**Postmining Land Use:** Continued quarrying operations, or wildlife habitat in the event operations are not continued.

### **Variances from Reclamation Standards (Rule R647) Granted:**

R647-4-111 Topsoil Areas disturbed prior to Harper's operations had no topsoil salvaged and stockpiled, therefore these areas are granted a variance to this rule. Previously undisturbed areas which will be disturbed are rocky and steep with minimal topsoil. These conditions make salvaging topsoil impractical. The undisturbed areas specifically granted this variance include: (1) the portion of the undisturbed "island" which will be disturbed(i.e. covered) by the final pit floor and final highwall, and (2) the northeast portion of this same undisturbed "island" which will be disturbed as a result of the new access roads on the steep terrain.

**R647-4-111 Revegetation** The Division standard of achieving 70% of pre-mining vegetative cover will not be applied to this site. Revegetation efforts at this site will be considered "successful" when the revegetation treatments have been performed according to the approved plan. The performance of these treatments will need to be verified in the field by Division personnel.

**Soils and Geology:**

**Soil Description:** There is no topsoil within any of the areas which were previously mined and the areas proposed to be mined which were previously undisturbed are mainly limestone outcrop and talus slopes.

**pH:** Unknown due to the lack of soil

**Special Handling Problems:** None

**Geology Description:** The project area is characterized by Cretaceous and Pennsylvanian sedimentary rock.

**Hydrology:**

**Ground Water Description:** These formations exhibit moderately low permeability, the primary porosity of the sediments is slight and there is only minimal secondary porosity due to the presence of joints or fractures (Healy, et al, 1971). There is no known groundwater of any significance in the vicinity, except for the existence of two intermittent springs which will not be impacted.

**Surface Water Description:** The surface water in this area is ephemeral in nature. Two intermittent springs outcrop west of the operation on Forest Service Property which may intersect, flow along side of, or cross the pit access road.

**Water Monitoring Plan:** There is no plan or requirement to monitor surface water at this time.

**Ecology:**

**Vegetation Type(s); Dominant Species:** The area surrounding the mine site is typical oakbrush/mountain brush vegetation type, dominated by gambel's oak, bigtooth maple, and chokecherry with an understory of mules ears, oregon grape and bedstraw.

**Percent Surrounding Vegetative Cover:** Area surrounding the mine site 50% - 60%

**Wildlife Concerns:** No impacts to threatened or endangered species or their critical habitats are expected. The surrounding area is valuable deer and elk winter habitat. The reclamation plan is designed to provide a quality forage for these species.

**Surface Facilities:** Two crushing and screening plants consisting of: a cone crusher, jaw crusher, a three deck screen, and associated conveyor equipment. A scale trailer will be on site and some miscellaneous equipment ( fuel tanks, water tanks). All equipment will be mobile.

**Mining and Reclamation Plan Summary:**

**During Operations:**

Airtrack drills will be used to drill blast holes, although a larger production drill may be used to meet production requirements. The holes would then be loaded with ANFO and blasted. The blasted material will be pushed with a dozer to either the southwest or eastern edge of the mining pit where it will run down a slope to the process areas. The material is loaded into trucks using a front end loader or it is transferred to a crushing/screening plant for further processing.. The products are trucked from the site for distribution. The outer lip of a ridge line will act as a visual buffer for the active quarry area. All new roads will be located on private lands. Existing roads on USFS land will also be used during operations.

**After Operations:**

At the conclusion of mining, all trash, oil, fuel, equipment, debris and structures will be removed from the site. All remaining stockpiles of loose material would be graded down to slopes of 3H:1V or less. Any trenches would be backfilled to eliminate safety hazards. Highwalls will be left, as is, with a 3 foot high safety berm in place at the outer edge of the bench. The overall slope angle of the new quarry face would be 45° or less. Quarry benches will receive revegetation treatments. There will be no ponds or other impounding structures remaining after operations. Roads to be reclaimed will be regraded to eliminate the inner roadside ditches and to convey runoff across the road surface by adequately spaced water bars. Reclaimed roads and the processing area will be scarified to increase infiltration of water and enhance revegetation potential. The ripped and scarified areas will be treated with a diammonium phosphate fertilizer at a rate of 160 lbs/acre. The Division approved seed mix will be broadcast over the reclaimed areas. Mulching will be accomplished by adding clean alfalfa hay at a rate of 2-3 tons/acre or manure at a rate of 5 dry tons/acre. If alfalfa hay is used, a means of anchoring will be used (i.e. crimping, netting, etc.). Vehicle access to these reclaimed areas will be restricted by six foot high berms.

**Surety:**

**Amount:** \$46,200

**Form:** Surety Bond (National Fire Insurance Co) #137997403

**Renewable Term:** 5 years (2003)